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Brazil, Canada, France, Italy, Moldova, Netherlands, Palau

COVER PHOTO: *Participants of the 5th Working Session of the International Network of Soil Information Institutions (INSII)*

SEE ENTRY ON PAGE 3. Photo courtesy of INSII

The IPD Newsletter is a biannual publication produced by the International Programs Division of the Natural Resources Conservation Service (NRCS).

The document provides a six-month overview of NRCS participation in international activities, which included providing technical assistance and exchanging scientific and technical information.

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IPD Newsletter

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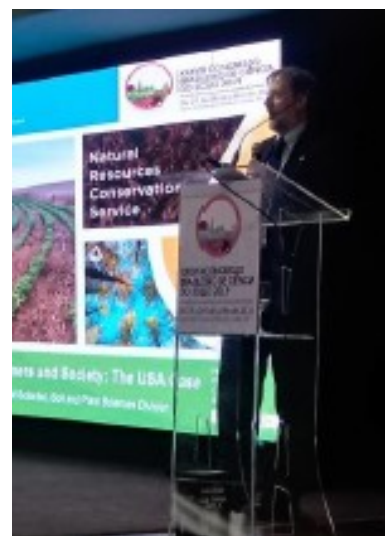
Activities

Brazil

Dr. Michael Robotham, National Soil Scientist and Leader of the Soils Information Branch, traveled to Cuiabá, Brazil, to attend the 37th Brazilian Congress of Soil Science from July 20 – 27, 2019. This conference brought together nearly 1,000 soil scientists, agronomists, and agriculture professionals from throughout Brazil around the theme of Sustainable Intensification of Production Systems. Attendees represented a broad cross-section of stakeholder groups, including government entities and agencies, non-governmental organizations, universities, and the private sector. The conference included oral and poster presentations on a wide range of topics, ranging from soil taxonomy to soil fertility and from soil biology to education and outreach. Dr. Robotham presented a plenary address titled "Benefits of the soil survey for farmers and the society: The USA case." He also participated in formal and informal discussions in the context of the conference and attended two field tours to observe the diversity of soil resources in Mato Grosso province and some of the innovative management strategies being used to sustainably manage those resources. Although the specifics of soils and climate differ from much of the United States, Brazilian agriculture faces many of the same challenges American agriculture has to maintain productivity in a sustainable manner into the future. Participation in the conference made it clear that there are ample opportunities for current and future collaboration with our Brazilian counterparts that have the potential to benefit both countries.

Canada

Jay Fuhrer, Soil Health Specialist,



NRCS NHQ National Soil Scientist Dr. Michael Robotham giving the plenary address at the Brazilian Soil Science Congress (CBCS)

from North Dakota, spoke at the annual conference of the Manitoba Forage and Grassland Association (MFGA) November 19 to 20, 2019, to address Soil Health Principles and served as a panelist at a question and answer session during the conference. The MFGA is an agricultural producer-based group focused on forages and grasslands, economic prosperity, and environmental opportunities that forage and grasslands provide and represent to Manitoba.



Attendees at the MFGA in Manitoba, Canada

France

Jay Fuhrer, Soil Health Specialist from North Dakota, spoke at the annual conference of the Regional Workshop of Agronomy and Sustainable Development in Alençon, France, November 11 to 15, 2019, to address Soil Health Principles during their annual conference. In addition to the conference, Mr. Fuhrer spent one day touring the Gaec Saillard farm. This farm cooperates with MacDonald's and has extensive use of cover crops.

The conference demonstrated a strong interest in sustainable agriculture from France. The exchange of information such as research data and on-the-ground practice application will benefit the participants and will be shared with NRCS employees and clients.



Post conference Cer-France interview, with Adrien Bloux and NRCS employee Jay Fuhrer

Italy

Dr. David Lindbo, Director of Soil & Plant Science Division, attended the fifth Working Session of the International Network of Soil Information Institutions (INSII) meeting October 21 to 23, 2019, in Rome, Italy. The meeting focused on the harmonization of soil analysis and interpretations as prerequisite to make soil

information comparable and interpretable across laboratories, countries, and regions. This supported the Global Soil Partnership's (GSP) key areas to address the need to further develop interoperable systems that improve the harmonized collection, processing, and evaluation of soil data and information across different assessment schemes. These issues were discussed with each GSP region to provide an overview of country statuses. Participants expressed a desire to develop an overarching system for harmonized soil characterization and information systems. They also acknowledged the difficulty in creating such a system. Implementation would focus on key areas of harmonization, including soil description and classification, laboratory analysis, soil information modelling, indicators and soil data evaluation, and interpretation while building on a set of agreed harmonization principles. The meeting highlighted how the increasing need for soil data covering large areas is being hampered by inconsistent and incomparable methods based on non-matching or diverging concepts – despite broadly available ISO standards. Soil analytical data that are derived from different methods cannot easily be compared given the great variety of analytical procedures and equipment used.

Moldova

Dr. Skye Wills, National Leader for Soil Science Research, participated in the International Black Soils Network from October 2 – 5, 2019, in Chisinau, Moldova. While there, she also attended a symposium on Eastern European Chernozems.

The purpose of the network is to highlight the importance of these soils to protect them and to share information about how best to manage them. While current soil

taxonomy and mapping efforts can identify areas of black soils, there is considerable disagreement about how narrow or wide to make the definition. Through scientific exchange, it is clear that many of these soils behave very similarly, while others have unique management challenges. A plan was made to seek scientific guidance from the GSP Intergovernmental Technical Panel about the best definition of Black Soils. That should facilitate future efforts in black soil mapping and information exchange. Comparing and contrasting the landscapes of Moldova to those of the U.S., Dr. Wills saw unfamiliar management operations, observed the applicability as well as the limitations of NRCS guidelines, definitions, and recommendations while using the opportunity to discuss common practices with those from other regions. Her participation assisted cooperating institutions gain a better understanding of U.S. Soil Taxonomy and the application of soil taxonomy to questions of land use and management.



Soil Scientist in a Soil Pit with poster and explanation of data on black soils in Moldova

Netherlands

Dr. Skye Wills, National Leader for Soil Science Research, attended the Wageningen Soil Conference Wageningen, Netherlands, from August 31 to September 4, 2019. The conference addressed soil function. Keynote topics included soil organic matter and land use change. General sessions discussed broad, large-impact studies. Parallel session talks were focused on more specific soil function issues. Master classes were held in which participants engaged in topics more deeply. Dr. Wills presented a general session talk on the Science of Soil Health Project and our intentions for measuring and mapping soil health-related soil properties. The talk was an opportunity to learn about similar international projects, such as Landmark, and develop contacts for further discussion. Dr. Wills attended master classes on a decision- support tool named "Dexi." This tool could assist with teaching and communications. In particular, it could be useful during the development of soil survey interpretations and during discussions regarding the use of spectral data for soil management. The tool has the potential to help frame how NRCS conceptualizes the use of similar technologies. The conference included a range of participants, including Europe, U.S. Geologic Survey, and The Nature Conservancy. The information gathered will contribute to improving the integration of soil function and decision support tools in the future work of the NRCS Soil and Plant Science Division. In addition to the conference, Dr. Wills visited Agrocates, a private company that operates a laboratory that supports spectral predictions of soil properties. Discussions included Agrocates' current work with a U.S. cooperator. Dr. Wills delivered a talk about NRCS, the U.S. Soil Survey, and how NRCS evaluates spectral predictions of soil properties.

Palau

Jan Surface, NRCS National Water Quality Specialist/Aquatic Ecologist attended the 42nd meeting of the US Coral Reef Task Force (Task Force) held at the Palau International Coral Reef Center in Koror, Palau, from September 8-23, 2019. The official business meeting was held at the Ngarachemayong Cultural Center in Koror.

Ms. Surface is USDA's principal representative on the Task Force. Invited to attend by Palau President Tommy Remengesau, Ms. Surface is a member of the Task Force's steering committee and co-chair of its watershed working group. She participated in a variety of workshops and site visits on topics including watersheds and land use, fisheries, Palau's Protected Areas Network, Palau's National Marine Sanctuary, and Palau's National Aquaculture Center.



Touring the Palau aquaculture center